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SOURCE Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk No 6, 1950, pp 952-955.

REVIEW OF "MINING MACHINES FOR EXTRACTING MINERALS FROM THEIR BEDS"
BY A. M. TERPIGOREV, P. N. DEMIDOV,
AND M. M. PROTOD'YAKONOV

A. V. Yevnevich

The book "Gornyye Mashiny dlya Vyyemki Plastovykh Poleznykh Iskopayemykh," was authorized by the Ministry of Higher Education USSR as a textbook for higher institutes of mining education. Eight thousand copies, at 23.40 rubles, were published in 1949 by the Ugletekhnizdat; 500 pp and 377 illustrations.

The following represents Yevnevich's comments and critical review of subject book.

FOREWORD and INTRODUCTION

A brief outline of the development of mining machines and scientific research on them. Data on the mechanization of extraction in the various coal fields of the USSR; the organization of work; and the Stakhanovite movement in the coal mines. Finally, a general classification of the various types of mining machines.

Part I. LONG WALL CUTTING MACHINES

Chapter 1. Introductory. General information on designation of machines; etc.

2. Cutting bits. Requirements and methods of production.
3. Cutting chains for cutting machines. Considerable data and clear drawings.
4. Guide frames for cutting chains.

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5. Mechanical dust removers.
6. Reduction gears for working parts of cutting machines.
- 7-10. Feeding mechanisms for cutting machines.
11. Automatic regulation of feeding speed.
12. The electrical system of cutting machines.
13. Technical exploitation of cutting machines (instructions and test data).
- 14-15. Organization of work. Brief survey of innovations since introduction of the continuous method of operation in 1931.
15. Analysis of output: efficiency of feeding system and labor.

Part II. SHORT WALL CUTTING MACHINES

Chapters 16-17. Inadequate consideration given to this type of machine by the authors and the mining industry.

Part III. MINING COMBINES

Chapters 18-27. These machines perform complex operations. Hundreds are in use in the Donbass, Kuzbass, and Karaganda areas. This section is inadequate in its classification of machines.

- 25 Flow sheet and composition of mining combines.
26. Peculiarities of Soviet mining combines. The KM-4 combine, well covered in periodical literature, is not mentioned in this work.

Part IV. DESCRIPTION OF PNEUMATIC DRILLS

Chapters 28-32. Not covered in this section are the theory of impact machines and results of recent Soviet research on increasing the useful activity and decreasing the recoil of pneumatic drills.

Part V. BORING MACHINES

Chapters 33-36. Systematic description of boring machines. Insufficient analysis of trends of development of these machines.

Zevnevich emphasizes the "priority" of Soviet mining machinery in the world and the advanced status of Soviet scientists because they have formulated the subject "Mining Machinery" into a separate scientific curriculum of technical schools. He remarks about the great progress made by Soviet mining since the preceding edition (1940) of this book. He is particularly concerned with the proper classification of machines, the theory of their operation, and an adequate historical account of their development. These are the principle bases on which he criticizes subject book. In spite of the book's deficiencies in these lines, however, he considers it as a definite indicator of the advance of Soviet science.

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